

# SOLID HIGH MOLECULAR ELECTROLYTE TYPE FUEL CELL

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## Abstract of JP5094832

**PURPOSE:**To increase the reaction gas amount passing through a cell as well as to make it possible to operate the cell stably, by providing humidifiers in the loops of a fuel cell, and adding the steam to the reaction gas so as to maintain a solid high polymer electrolyte in a wetting condition constantly.

**CONSTITUTION:**Recycle loops 7 and 8 are provided newly, and pumps 6 and 4 are provided in the loops 7 and 8. And a reaction gas recycled by the loops is led to a cell through humidifiers 5, and in this case, the number of passing is made numerous, and the including amount of steam is increased to make it possible to feed a necessary amount of moisture. And the reflux ratio of the recycled reaction gas is set as desired in the relation with the output property of the cell. Although a bubbler is used as the humidifier, a steam generator, an ultrasonic humidifier, an internal humidifier, and the like can be used instead of the bubbler.

